What is claimed is:

1. A method of treating water in a water distribution system, comprising:

admixing a sodium chlorite solution with a second solution containing an acid to make a reacted mixture; and

introducing a predetermined amount of the reacted mixture into a water system.

2. The method of claim 1, comprising introducing the reacted mixture into the water to inhibit and/or eliminate bacterial fouling in the system.

3. The method of claim 1, comprising introducing the activated mixture into the water for inhibiting and/or removing mineral deposits from the system.

4. The method of claim 2, comprising introducing the activated mixture into the water for inhibiting and/or removing mineral deposits from the system.

5. The method of claim 1, comprising introducing the activated mixture into the water for reducing or eliminating microorganisms from the system.

6. The method of claim 2, comprising introducing the activated mixture into the water for reducing or eliminating microorganisms from the system.

7. The method of claim 3, comprising introducing the activated mixture into the water for reducing or eliminating microorganisms from the system.

8. The method of claim 4, comprising introducing the activated mixture for reducing or eliminating microorganisms from the system.

9. The method of claim 1, wherein the second component is acidic enough to convert the sodium chlorite into chlorine dioxide while remaining unaffected in the reacted mixture and at the same time being a mineral antiscalant.

10. The method of claim 1, wherein the second solution is formed by adding 2-phosphonobutane-1,2,4-tricarboxylic acid (PBTC) and sodium molybdate di-hydrate and water.

11. The method of claim 1, wherein the second compound contains PBTC.

12. The method of claim 1, wherein the second compound is a mixture of mineral acids and antiscalant polymers.

13. The method of claim 12, wherein the antiscalant polymer is polyacrylic acid.

14. The method of claim 12, wherein the anticscalant polymer is a polymeric compound.

15. The method of claim 1, wherein the second compound has the attributes of being acidic enough to convert sodium chlorite into chlorine dioxide while remaining unaffected in the reaction mixture.

16. The method of claim 1, further comprising using an antiscalant, dispersant compound, as an acid activator, to

enhance the properties of the reacted mixture towards controlling mineral deposits in the water system.

17. The method of claim 16, further comprising using a catalyst to enhance conversion of the sodium chlorite into an active biocide, chlorine dioxide.

18. The method of claim 17, wherein the catalyst is sodium molybdate.

19. A reacted mixture resulting from admixing a sodium chlorite solution with a second solution containing an acid to make the reacted mixture.

20. The composition of claim 19, wherein the composition will inhibit and/or eliminate bacterial fouling introduced into a water system.

21. The composition of claim 19, wherein the composition will inhibit and/or remove mineral deposits from the water system.

22. The composition of claim 19, wherein the composition will inhibit and/or remove mineral deposits when introduced into a water system.

23. The composition of claim 19, wherein the composition will reduce and/or eliminate microorganisms from a water system when introduced into the water system.

24. The composition of claim 19, wherein the second component is acidic enough that it will convert the sodium chlorite into chlorine dioxide while remaining unaffected in the reacted mixture and at the same time will be a mineral antiscalant.